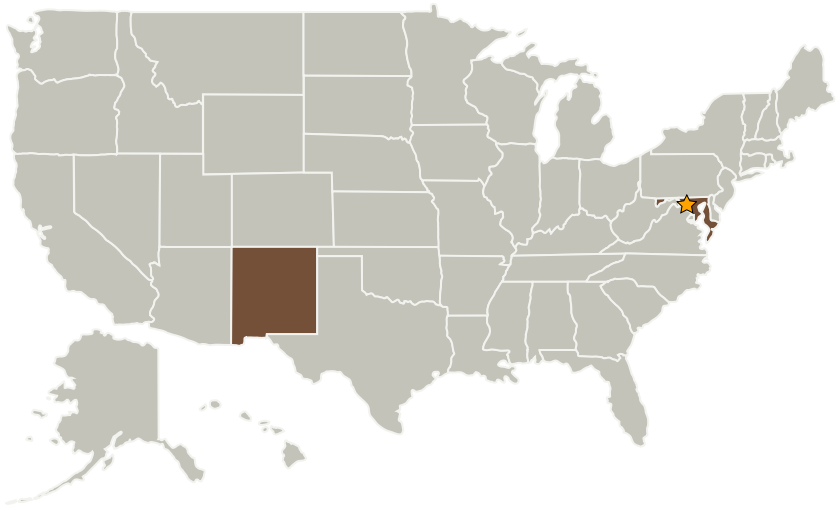
Magnetometer for Calibrating Jovian Fields, Phase I

Completed Technology Project (2008 - 2008)

Project Introduction

This Phase I SBIR project will investigate a method to accurately measure total magnetic fields in the range 0 to 1.6 mT in support of missions to Jupiter. The measurement approach is based on fundamental physical quantities. High sensitivity will be demonstrated, and an upper bound on systematic errors will be determined. The intrinsic heading error will be directly measured. Successful completion of Phase I and Phase II will lead to a compact, fiber-coupled instrument for measuring magnetic fields with high accuracy and precision.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland
Southwest Sciences, Inc.	Supporting Organization	Industry	Santa Fe, New Mexico

Primary U.S. Work Locations	
Maryland	New Mexico

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

David Hovde

Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.3 In-Situ Instruments and Sensors
    - TX08.3.1 Field and Particle Detectors